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ABSTRACT

This report describes the development, implementation and evaluation of a pilot project aimed at reducing factors that contribute to the high dropout rate among students in vocational education programs. The author is concerned with reducing such factors as absenteeism, tardiness, suspensions, class cutting, and with increasing student participation in extracurricular activities, interest in school, and reading progress. The 60 tenth grade students with high dropout potential who participated in the project were formed into experimental and control groups. Students in the experimental group were given intensive, competency-based skills utilizing a new instructional delivery system. Two teachers and one guidance counselor were selected to work as a team with these students for nine consecutive months. The control group received no special treatment and functioned as part of the traditional vocational program. A summative evaluation of the project is presented with tables, and it is concluded that the program resulted in a reduction in truancy, suspensions, tardiness, class cutting, absenteeism and students dropping out of school. Gains were also realized in student performance. (Author/DOW)

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Development and Implementation of a Structured Program for the Systematic Reduction of Factors Contributing to Students Dropping Out of School

by Aaron Wilson, Jr.[1]

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Bucks County Cluster #2
Submitted: September 21, 1977

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TABLE OF CONTENTS

LIST OF TABLES..... vi

PREFACE..... vii

Chapter

I. INTRODUCTION..... 1

Definition of Terms..... 3

II. THE PROBLEM..... 5

Terminal Objectives..... 6

III. REVIEW OF THE LITERATURE..... 8

IV. STRATEGY..... 14

Process Objectives..... 18

V. THE DESIGN..... 19

Advisory Committee..... 19

Supervisory Team..... 21

Orientation..... 22

Pilot Course..... 22

Instructional Personnel..... 23

Student Population..... 28

Workshops..... 30

Instructional Plan..... 32

VI. INSTRUCTIONAL MODULES..... 35

VII. EVALUATION..... 49

Findings..... 51

VIII. CONCLUSIONS AND RECOMMENDATIONS..... 56

BIBLIOGRAPHY..... 58

APPENDIXES

A. ADVISORY COMMITTEE..... 61

B. INTERVIEW CHECK SHEET..... 62

C. CASE STUDY..... 63

D. SOME FACTORS WHICH CAUSE STUDENTS TO LEAVE OR REMAIN IN SCHOOL..... 72

E. BUDGETARY PROVISIONS..... 73

F. STUDENT RESPONSE SCALE (Instructor Evaluation)..... 74

G. STUDENT RESPONSE SCALE (Instructor and Program Evaluation)..... 75

H. FACILITIES EVALUATION..... 81

LIST OF TABLES

1. Identification of Basic Tools, Comparison of Student Responses..... 37
2. Identification of Autobody Parts, Comparison of Student Responses..... 38
3. Estimation of Physical Damage, Comparison of Student Responses..... 39
4. Special Autobody Tools, Comparison of Student Responses..... 41
5. Repair and Replacement Procedures, Comparison of Student Responses..... 42
6. Cost Estimates, Comparison of Student Responses..... 43
7. Oxyacetylene Welding for Autobody Repair, Comparison of Student Responses..... 44
8. Techniques of Shaping Metal, Comparison of Student Responses..... 45
9. Refinishing Procedures, Comparison of Student Responses..... 47
10. Reading, Comparison of Student Responses..... 48
11. Competency Test..... 53
12. Attendance Comparisons Between Groups, 1975-76 Calendar Year..... 54
13. Humanistic Characteristics of Selected Instructional Personnel, Comparison of Responses Between Selection Committee and Experimental Group..... 55

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PREFACE

There are many problems in vocational education that periodically come under examination. Today, one of the problems receiving major attention is the problem of the dropout. A large percentage of students are leaving school before they have completed their training. Thousands of other youngsters are not functioning at the level of their intellectual competence. These groups represent a tragic waste of resources of our young people at a time when their fullest productivity is needed.

In an effort to reduce this problem in the Chester Upland School District's vocational education program a two-phase project was undertaken. This Introductory Report covers the pilot phase of a project that was designed to demonstrate the feasibility and effectiveness of the program within a single course of a vocational training program. The pilot phase provided the means for testing and refining the concept with minimum commitment of funds, manpower and time.

Based upon demonstrated success of the pilot phase, the expansion and refinement of the program into other vocational courses at the high school level, and finally, into the industrial arts programs of the four middle schools within the district will constitute the second phase of the project, and is the subject of the author's Group-Individual Practicum covered in a separate report. The expanded programs will utilize techniques which have been demonstrated to be effective during the pilot effort with modifications to suit the wider range of needs encountered throughout the district.

CHAPTER I

INTRODUCTION

To combat society's declining acceptance of untrained youth, schools are making headway in prolonging education for a greater percentage of students each year. Dropout prevention programs previously functioned by providing students with supplemental income, which either permitted or induced them to remain in school. Such programs appeared to be successful when viewed in terms of this limited objective. Unfortunately, the aforementioned limited type programs have not proven to be the answer to Chester High School's above-average dropout problem. Consequently, the scope of a program for potential dropouts was broadened considerably after this practicum, and recommended to become a permanent part of the school system.

According to an assessment of school-supervised work education programs conducted by the Office of Planning, Budgeting and Evaluation, United States Office of Education in 1973, satisfaction with school increased to a significantly greater degree among students participating in the work education program than among those working, but not involved in the program.[1] This finding strengthens the premise

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[1] NASSP, Curriculum Report, (Washington: December, 1973), p. 4.

that aiding the student financially was not in itself a deterrent to dropping out.

We are still trying to get young people to do things that seem unrelated to their needs and purposes. Some dropouts leave school because they cannot see relevance to their own needs and purposes.

With a few exceptions, the student is still in a "take this or else" academic situation--the "else" being exclusion from school, sometimes by request, but usually by failing out. We are putting them on what Ernest Melby calls the human scrap-heap. After they are on the scrap-heaps filled with feelings of failure, quite an effort is made to get them to come back and finish what they have already rejected.

It was quite evident to the author that vocational programs in the Chester Upland School District, from which the dropout was a fugitive, had to be modified to meet the needs of those who rejected them. A new system of delivering vocational education was of paramount importance. Positive innovations had to be employed into what was to be taught, who was to teach it, and how it was to be taught.

This pilot project humanized the education of a group of potential dropouts by utilizing selected instructional personnel who worked closely and continuously with them to develop appropriate skills in order that they would feel successful and secure in challenging situations.

Definition of Terms

Advisory Committee:

A group of individuals from outside the education profession chosen from the community to advise school officials regarding the pilot project. The committee, composed of representatives from business, industry, labor, parents, present and former students, provided the information and guidance needed to keep the project current.

Autobody Repair:

The art of restoring a damaged vehicle to its original contour and finish.

Delivery System:

The procedures by which this project was administered, and the methods by which students were guided through learning activities to achieve the objectives.

Dropout:

The dropout in this project is defined as any student who leaves high school without graduating. This working definition does not include students who transferred to another school, students who were hospitalized during the school year, or students who died. It does, however, include students who voluntarily left school before receiving a high school diploma, and students who were excluded from school by the principal or school board.

ERIC:

Educational Resources Information Center

Labor Market Needs:

Data that was collected, analyzed and published by national, state and local governmental agencies which described employment opportunities, predicted future occupational trends, and described those occupations which were obsolete.

Related Teacher:

One who related the academic areas (English, math, and social studies) to autobody repair and the world of work.

RISE:

Research and Information Services for Education

Skills Teacher:

One who possessed certification in a Trade and Industrial area of Vocational Education (autobody repair).

Supervisory Team:

A group of persons consisting of the high school Principal, Director of Guidance, Director of Vocational Education, Assistant Director of Vocational Education, and the President of the Chester Education Association that were utilized to select the instructional personnel for the project.

VEIN:

Vocational Education Information Network

Vocational Education:

Education related to, or being in training in a skill or trade to be pursued as a career.

CHAPTER II

THE PROBLEM

The major problem focused upon was reducing factors such as, truancy, suspensions, tardiness, cutting of classes, and absenteeism that contribute to the high dropout rate of students enrolled in vocational education programs in the Chester Upland School District. School records that formulated the Average Daily Membership, Average Daily Attendance, Sixty Day, One Hundred Twenty Day, and One Hundred Eighty Day Attendance Reports indicated the existence of an attendance problem.

The problem of students not attending school had such an impact that the School Board issued a mandate during the 1974-75 school year directing all supervisory personnel to perform daily "spot checks" on all classes. An analysis of the data compiled for seventeen trade and industrial classes within the vocational department during the 1974-75 school year revealed that out of a total of 425 tenth, eleventh and twelfth grade students listed on the class rolls, an average of six percent were found to be truant, thirteen percent were on suspension, nineteen percent were absent, twelve percent were cutting classes, twenty percent were tardy, and eleven percent had, in fact, dropped out. As a result of negative

attendance, programs in air-conditioning and refrigeration, machine shop, and ornamental horticulture were discontinued at the close of the school year. At the end of the following year, printing, dental technology, one program in home economics, and one program in industrial arts were discontinued.

The Assistant Director of Vocational Education further investigated the problem, and its future implications for existing vocational programs. School records indicated that twenty-five percent of students entering ninth grade in September. 1972 failed to remain in school to complete graduation in June, 1976. Thirty-two percent of the students enrolled in vocational education left school during this same period. It was critical that a new approach be developed to curtail this problem as lack of attendance was viewed as a warning signal that the student was approaching the danger area, and perhaps was a sign that something was wrong.

Terminal Objectives

There are many factors relating to dropping out of school. Based on the known characteristics of dropouts in the Chester Upland School District, and some of the more common characteristics as revealed by the literature, the objectives of the first phase of this project are as follows:

1. Reduce daily tardiness of the treated group by fifty percent when compared to daily tardiness of the untreated group.

2. Reduce daily class cutting of the treated group by one hundred percent when compared to daily class cutting of the un-treated group.
3. Reduce daily absenteeism of the treated group by eighty percent when compared to daily absenteeism of the un-treated group.
4. Reduce average weekly suspension rate of the treated group by fifty percent when compared to average weekly suspension rate of the un-treated group.
5. Reduce the dropout rate of the treated group by eighty percent when compared to the dropout rate of the un-treated group.
6. Increase average daily attendance of the treated group by fifty percent when compared to average daily attendance of the un-treated group.
7. Increase participation in school activities of the treated group by one hundred percent when compared to participation in school activities of the un-treated group.

CHAPTER III

REVIEW OF THE LITERATURE

A state-of-the-art search was conducted to determine what had been done on the national, state and local levels with respect to the dropout problem. Additional information was secured through organizations such as ERIC, VEIN, RISE, the Pennsylvania Department of Education, and other school districts.

There were voluminous published materials on the dropout. However, many articles that have been written merely exhorted us to do something about the problem, or told us that there was a problem, but added little to help us understand the problem. The writer reviewed several studies which were representative of approaches to the problem.

One of the earliest studies in the area of the school dropout was made by Thorndike.[2] Based on enrollment data from twenty-three cities, Thorndike found that in the year 1900 most of the elimination from school took place before the first year of high school, with very few leaving during the high school years. Of those pupils who started school during the years 1900-1904, 81.7 percent left school in the fifth and sixth grades and in the sixth

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[2] Reported in Elias J. Kline, "Significant Changes in the Curve of Elimination Since 1900," Journal of Educational Research, XXVI (1933), 608-16.

and seventh grades respectively.

In 1918, Kline[3] repeated Thorndike's study. Using sixteen of the same cities that Thorndike used, Kline found some significant changes in the dropout pattern. Kline's objectives were to discover the nature of the change in the dropout pattern since 1900, and to determine what evidence there was that the junior high school was responsible for these changes. His findings showed a significant shift in the age of the dropout. Thorndike found that most school leaving occurred during the fifth, sixth, and seventh grades, whereas Kline found the greatest number of school leavers left between ninth and tenth grade. Thus, in the short period of eighteen years, elimination from school was postponed an average of two to three years.

A study by Moore[4] notes discrepancies between reasons for withdrawal found on school records, and those obtained from the testimony of dropouts. Moore studied Negroes who dropped out of school prior to graduation. He found that where school records indicated only five students dropped out because of pregnancy, the interviews with the dropouts revealed that sixty-seven had left because of pregnancy.

Bowman and Matthew[5] made a study of all students in the

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[3]Ibid.

[4]Parlett C. Moore, "Factors Determining Elimination in the Negro Secondary School Prior to Graduation," Journal of Educational Research, L (1956), pp. 191-96.

[5]Paul H. Bowman and Charles V. Matthews, Motivations of Youth Leaving School. Quincy Youth Development Project (Chicago: University of Chicago, mimeographed, 1960).

sixth grade of the public schools of Quincy, Illinois in the school year 1951-52. Data were collected on the entire group for eight years following grade six. At the end of tenth grade, a list was compiled of all students who had dropped out of school up to that time. During the next two years each dropout was interviewed approximately six months after he left school. At the same time, the current or last employer of the dropout was interviewed about the student's work performance. The factors studied were intelligence, social status, personal and social adjustment, achievement values, and aspirations.

Findings from this study indicated that the dropout rate from the potential graduating class was 31.9 percent and that the dropouts had more school absenteeism, were poor readers, and were found to be academically below average. The authors added that the dropout did not have the skill, responsibility, and personal and social adjustment necessary to obtain and hold a part-time job while attending school; he did not obtain a job for long; and he made relatively poor work records.

One of the most comprehensive studies of dropouts was made by Dillon[6] under the auspices of the National Child Labor Committee. The subjects for this study were 1300 youth in five Midwestern communities. These youths were interviewed by teachers, counselors, principals, and

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[6]Harold J. Dillon, Early School Leavers--A Major Educational Problem, National Child Labor Committee Pamphlet No. 401 (New York: Moak Printing Co., 1949.

attendance workers in order to obtain the data for the study.

Dillon came to the following major conclusions concerning dropouts:

1. There was a fairly consistent regression in scholarship from the elementary school to the junior and senior high schools.
2. There was a high frequency of grade or subject failure in the junior and senior high schools.
3. There was a marked regression in attendance from the elementary school to the junior and senior high schools.
4. There was evidence of a feeling of insecurity of "lack of belonging."
5. There were frequent transfers from one school to another for the dropouts.
6. There was a marked lack of interest in school work.

Other findings of this study were: more boys than girls dropped out of school; and the largest group of students terminated their schooling at the tenth grade level, while the next largest group left from the ninth grade.

The primary reason found by Dillon for leaving school prior to graduation was one which specifically related to school. Some of the reasons given were: preferred work to school, was not interested in school work, could not learn and was discouraged, was failing and did not want to repeat the grade, disliked a certain teacher, disliked a certain subject, and could learn more out of school than in school. Almost seventy percent of the dropouts fell into this category and

gave dissatisfaction with school as the primary reason for leaving.

Thomas[7] conducted a study in one high school in an attempt to find factors related to leaving school before graduation. He found the factor most related to whether or not the student finished high school was participation in school activities.

In 1947, a study of youth out of school and in the labor market was undertaken under the aegis of the United States Department of Labor.[8] Of the 524 boys and girls in the sample, 440 of them did not graduate from high school. Findings from this study indicate that among 14-15 year old youths, progress beyond the eighth grade was the exception rather than the rule; only 17.7 percent of this age group completed a higher grade. In the 16-17 year old group, only 47.5 percent advanced beyond the eighth grade, and only 18.9 percent beyond the ninth. Nearly half of the 16-17 year olds and almost one-fourth of the 18-19 year olds left school before the age of sixteen.

Dissatisfaction with school was the major reason for leaving school prior to graduation. Of the 440 young people who were school dropouts, 209 gave this as the major reason. In addition, 84 youths mentioned dissatisfaction with school as a secondary reason for leaving.

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[7] Robert J. Thomas, "An Empirical Study of High School Dropouts in Regard to Ten Possibly Related Factors," The Journal of Educational Sociology, XXVIII (1954), 11-18.

[8] Elizabeth Johnson, "Why Young People Leave School," National Association of Secondary School Principals Bulletin, XXXII (1948), 14-24.

From this brief review of the literature, one finds that there were many factors to which causality for dropping out of school is attributed. Various studies of dropouts obtained information on such factors as age, sex, courses taken, failures, grade retention, attitudes towards teachers, participation in extracurricular activities, intelligence, scholastic grades, achievement test scores, and social ideals.

There was no one factor that was responsible for all of the dropouts; nor can any single group of factors account for each individual case. It appeared that the dropout could not be completely characterized and made into a neat prototype, but research has identified a number of indicators of those characteristics that distinguish dropouts as a group from those young people who stay in school and graduate.

CHAPTER IV

STRATEGY

Many programs have been designed in an attempt to reduce factors that contribute to students dropping out of school. Some of these programs consumed a great deal of financial resources, only to become discarded because, though effective, such effectiveness was not demonstrated to critics and/or funding sources.

There was no one factor that was responsible for students dropping out of school; nor could any single group of factors account for each individual case. The dropout could not be completely characterized and made into a neat prototype, but research has identified a number of indicators that distinguish the potential dropout from those young people who remain in school and graduate.

The literature revealed that a significant indicator of high dropout potential is lack of attendance. Daniel W. Snepp[9] reported that eighty percent of the dropouts in his study had chronic attendance problems. Joseph J. Stevens[10] reported significant dif-

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[9]Daniel W. Snepp, "Can We Salvage the Dropout?," Clearing House, XXXI (1956), 49-54.

[10]Joseph J. Stevens, The Development and Testing of a Model for the Identification of Potential School Dropouts, Greely: Colorado State College, 1965, 140.

ferences in absence records of dropouts and graduates. Sullivan[11] found that dropouts accounted for eighty percent of absences during their last year of attendance. Findings from a study conducted by Bowman and Matthews[12] indicated that the dropout rate from a potential graduating class was 31.9 percent, and the dropouts had more school absenteeism. Findings from these studies supported the premise that poor attendance was symptomatic of the potential dropout.

Additional studies of dropouts indicated dissatisfaction with school as reasons for marked regression in attendance that ultimately led to dropping out. In a study conducted by Robert J. Thomas[13] 209 young people cited dissatisfaction with school as the major reason for leaving prior to graduation; 84 youths mentioned dissatisfaction as a secondary reason for leaving. Havighurst, and others reported that 47 percent of the dropouts questioned in their study gave answers classified as negative school experiences or negative attitudes toward school.

The author's concern in this project was reducing truancy, suspensions, tardiness, class cutting, and absenteeism that contributed to the high dropout rate among students in vocational programs in the Chester Upland School District. A conceptualized solution to the identified problem was to humanize the education for a group of potential dropouts, and to change the delivery system within a single

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[11] Floyd W. Sullivan, A Study of the Holding Power of Two Selected Negro High Schools of Atlanta, Georgia, (New York: New York University, 1963), p. 207.

[12] Bowman and Matthews, Youth Leaving School, p. 130.

[13] Thomas, Ten Possibly Related Factors, p. 15.

course of a vocational training program by making a more careful selection and preparation of teacher personnel, conducting a more effective guidance and counseling program, providing for individualized instruction, increasing student involvement in extracurricular activities, soliciting community involvement, maintaining a closer liaison between the school, the community and industry, and by continuously monitoring and evaluating student performance.

An advisory committee representing a cross section of the total community (business, industry, and labor) was organized to provide input in determining need, and to assist with program development and evaluation.

A supervisory team was selected by the author to assist with identifying, interviewing, and recommending instructional personnel to participate in the project. This group was comprised of the Director of Vocational Education, high school Principal, Director of Guidance, the President of the Chester Upland Education Association, and the Assistant Director of Vocational Education.

Instructional personnel who participated in the project functioned as an instructional team in planning effective procedures for working with the students. They were selected by the supervisory team with the assistance of the advisory committee based upon demonstrated skill and teaching effectiveness (see pages 23-28). Specific personality traits displayed by selected instructional personnel included trust, empathy, understanding, flexibility, personal interest, a well-developed philosophy of education, and a sincere desire

to work toward helping students to develop their skills and talents. Personal relationships between teachers and students were emphasized, and the selection of staff possessing positive humanistic attributes enabled them to empathize with and support students who had a history of problems. The pairing of a vocational skills teacher with a related subject-matter or basics teacher enhanced the learning environment and provided demonstrated success.

An orientation session was held by the author to familiarize the supervisory team and advisory committee with the project. A healthy climate was effected by involving them in the process of defining the problem area, analyzing the problem, recommending changes to be made, and implementing the changes.

Specific curricular changes implemented during the first phase of the project included the concept of competency-based education, a reduction in the student-teacher ratio, flexible scheduling to allow for individual differences, an educational media center, the utilization of resource persons, an extensive use of field trips as a motivating force, and community involvement. A change in scheduling permitted student participation in at least one extracurricular activity.

The concept was pilot-tested in an autobody repair course. An investigation of the immediate area's job market possibilities (see page 22) indicated that there were many employment opportunities for students in this expanding field.

The individualized curriculum design utilized instructional modules that permitted the teachers, counselor and students to establish realistic work goals, and to review achievement on a daily basis. A program which provided for the unique development of each individual, and allowed for questioning, probing, seeking, and experimenting with realia was the "modus operandi" of this practicum. Chapter V provides a detailed description of the method used in carrying out the strategy.

Process Objectives

Prior to conceiving a method for reducing factors contributing to students dropping out of school in the Chester Upland School District, the following process objectives were formulated to assist the author with the achievement of terminal objectives:

1. Establish an advisory committee
2. Select a supervisory team
3. Conduct an orientation session for the advisory committee and supervisory team
4. Identify pilot course to be utilized for the project
5. Identify instructional personnel involved in the project
6. Identify student population involved in the project
7. Conduct workshops for instructional personnel involved in the project
8. Develop an instructional plan
9. Develop a procedure for evaluation of the project

CHAPTER V

THE DESIGN

Preparatory to the start of this project, an investigation (see pages 5-6) was undertaken by the Assistant Director of Vocational Education with the cooperation of guidance counselors, deans of students, the building principal, supervisors, parents and students to determine the necessity for developing and implementing a program in the vocational department designed to reduce factors as truancy, suspensions, cutting classes, tardiness, and absenteeism that contributed to students dropping out of school. This was accomplished through a search of attendance and truancy reports, suspension letters, referral forms (tardiness, cutting of classes), student withdrawal records, and by interviewing students and parents. The search revealed a high degree of negative attendance, and was viewed as a warning signal that the student was approaching a danger area.

Advisory Committee

An advisory committee representing a cross section of the total community was organized to provide input in determining need, and to assist with program development, implementation and evaluation. The author assumed the responsibility for selecting eight

individuals to serve on this committee which consisted of two representatives from industry, two from business, one from the community, one from labor, one student, and one parent (see appendix A).

During the selection process, the following criteria were utilized to determine committee membership:

1. Willingness to attend a minimum of two meetings per month
2. Interest in the project

The advisory committee had no legislative or administrative authority. Its basic function was to advise the author and instructional personnel regarding the program. Specific functions were to:

1. Assist in the development of program objectives and activities
2. Advise on the type of skills, knowledges and attitudes needed to prepare students for entry into the autobody repair occupation
3. Recommend physical facilities and types of equipment needed to facilitate the project
4. Recommend standards of competency and achievement which are necessary for entry into employment
5. Keep the school informed of current specific needs and changes in the labor market
6. Assess project needs in terms of community needs
7. Assist with an evaluation of instruction

Supervisory Team

The author utilized input from the advisory committee in selecting the Principal of Chester High School, the Director of Vocational Education, the Director of Guidance, and President of the Chester Upland School District Education Association to serve as the supervisory team. The Principal provided valuable input as to the overall performance of teachers. Since he was responsible for performing evaluations for all high school teachers, the knowledge he derived from daily observations provided input into the selection process. The Director of Vocational Education expressed much enthusiasm for the project from its inception. He provided information regarding the daily operating procedures for vocational programs, and was knowledgeable of the skills possessed by teachers in the vocational department as he was responsible for interviewing and recommending the employment of vocational personnel to the Superintendent. The Director of Guidance welcomed the opportunity to become involved in an effort to implement a project designed to assist students with remaining in school. This office was viewed as a direct linkage between students, student records, teachers, community, and parents. The President of the Chester Upland School District Education Association viewed the project as being helpful to teachers as well as to the students. He made frequent inquiries about the project, and participated in many of the planning sessions. The author, who is the Assistant Director of Vocational Education, was an important member of of the team. As a result, many communication gaps were readily resolved as he provided information pertinent to the project's development and implementation.

Orientation

An orientation session was held for the supervisory team and the advisory committee to provide an opportunity for the author to present an overview of the information revealed in the needs assessment and state-of-the-art search. The need to do something about the dropout problem in the district was discussed. The group was in agreement that an innovative program should be developed and implemented, and the results of the attendance data recorded in relation to the effect the program had, if any, on reducing truancy, suspensions, tardiness, class cutting, and absenteeism that caused students to drop out of school. It was suggested that an extensive evaluative plan be employed to adequately assess the program's strengths and weaknesses.

Pilot Course

At the conclusion of the orientation session, the area of autobody repair was chosen as the instructional area because of the employment opportunities available to high school graduates seeking employment in this occupation throughout the Delaware Valley Region. A projected analysis of the labor market needs in the area of autobody repair, as conducted by the Pennsylvania Department of Labor, predicted an increasing need for personnel possessing these types of skills. With the above in mind, a program was developed that not only enriched the curriculum, but established paths to new avenues

that provided opportunities for a group of students seeking employment. Since the city of Chester, a highly industrialized, urban area, is located within a 50-mile radius of five automotive assembly plants and numerous autobody repair businesses, it was felt that a program in autobody repair would be an effective means for producing entry-level, skilled personnel who could assist in meeting the labor market needs of the automotive industry.

Instructional Personnel

An effective approach to working with potential dropouts was the establishment of an instructional team that harmoniously and continuously worked together to humanize the education of a group of potential dropouts for nine, consecutive months. Humanistic education as viewed by the author suggested a human-centered educational program which provided for humanizing experiences in the classroom by providing a growth-facilitating emotional environment, and by developing approaches for releasing student potential through a student-centered teaching approach.

Two classroom teachers (one skills, one related) and one guidance counselor were selected by the supervisory team with the assistance of the advisory committee. The team went beyond the realm of merely selecting individuals with a college degree or teaching certificate.

At the outset of the selection process, the supervisory team developed specific characteristics that were attributable to teachers

who displayed humaness in an educational setting. These characteristics were identified as follows:

The humane teacher

observes and listens to students with care and concern;

achieves openness in student-teacher relationships to permit response and interaction;

achieves free and constructive communication with students;

is accepting of different opinions;

displays concern for persons as individuals;

lets the student discover and excercise his own resources;

recognizes and accepts different ways of responding according to students' individualized needs;

makes the development of the learner the chief goal in teaching subject matter;

responds in ways that lead students to assume responsibility;

accepts himself as is, and is able to accept others as they are;

exhibits behavior that is predictable and consistent;

is hospitable and friendly;

is willing to perform various school tasks that are above and beyond stated duties;

actively participates in school functions, committees and organizations;

derives satisfaction from being a member of the school system and teaching profession.

The supervisory team was asked to identify, from within the District's existing instructional personnel, five guidance counselors, five related teachers, and two skills teachers who demonstrated these characteristics. Twelve individuals were identified, and invited to attend a group session to receive an explanation of the program, and to review the responsibilities of instructional personnel selected to participate.

Following the group session, candidates were interviewed on an individual basis by the supervisory team with the assistance of the advisory committee. An interview check sheet (see appendix B) was developed by the author to provide uniformity. At the conclusion of each interview, candidates were evaluated in relation to the previously stated characteristics (see pages 24-25) utilizing a numerical rating scale ranging from 1 - 4 points. The following interpretations were applied to the numerical scale:

4 points - excellent

3 points - good

2 points - fair

1 point - poor

Interview check sheets were tallied by the supervisory team. The guidance counselor, the skills teacher, and the related teacher

who possessed the highest number of points with a rating of 3 points or better on each characteristic were selected by the supervisory team and the advisory committee to participate in the program. Letters were sent to all individuals who displayed an interest thanking them for their interest and informing them of the team's final selections.

The selected skills instructor, prior to entering the teaching profession, completed twenty-two years of significant work experience in the autobody repair trade. His competence in the trade had been previously certified by the State through the use of a Trade Competency Examination. Throughout his tenure with the Chester Upland School District he displayed a sincere interest toward helping students to develop skills necessary for success in school. His approach to teaching was that of placing human value above subject matter. He was able to instill pride by convincing students that autobody repair was more than merely straightening, forming, and painting metal, but was truly an art. Because of his extensive work experience background students were exposed to a variety of relevant and innovative classroom experiences; thus, confidence in the teacher was generated and the benefits of the program exceeded all expectations.

Prior to her employment with the Chester Upland School District the selected related instructor taught English, math, and social studies while serving in the Armed Forces. For the past

twelve years her primary responsibilities have been to coordinate related subject matter with laboratory experiences for students enrolled in vocational programs.

A certified vocational guidance counselor assisted students with their social, emotional, educational and vocational development. Her previous work experiences included employment with the Philadelphia Public School System and the Opportunities Industrialization Center where she oriented, counseled, placed students on jobs, and observed and evaluated students while they were employed.

The role she assumed during the execution of the project was assisting students by helping them to understand themselves, by assessing their educational and vocational choices on an accurate analysis of themselves. She provided the professional skills necessary in interpreting test data, and demonstrated to the students that she was willing to discuss any problem that the student might have had and stressed that the student would not be punished for making his feelings known. The counselor also provided assistance for teachers by helping them adapt teaching materials to the needs of the student. It was this added dimension of the counselor's role that made the relationship with both the teachers and the students meaningful and vital.

The counselor served as the chairperson of the instructional team, and assisted in planning effective procedures for

working with the students. Each member of the team contributed his own unique talents and specific information about a student, which, when put together, gave a clearer picture of the student than any single person could have individually. The importance of working together was the most important facet in the procedure. For too long, teachers and counselors have had the distinct notion that they were expected to solve problems single-handedly; but, the team approach provided the opportunity to work together. Together they discussed the liabilities for individual students, and plannned courses of action. By working harmoniously and continuously lines of communication were developed which provided for the mobilization of diverse talents and resources not otherwise available.

Student Population

Identifying the potential dropout was the single most important factor in the development of the project. This seemingly simple task was complicated because of the variety and pattern of factors that cause young people to drop out of school. There was no single or simple formula for measuring the potential dropout. Each student was examined in view of the forces that would impel him to leave school. The majority of the students participating in the project were black, reflecting the predominant population of the school district. By governmental stand-

ards, they are classified, socio-economically, as poverty level and below. A large percentage came from families receiving public assistance.

Although the author did not refuse students who had been referred after already dropping out of school, an effort was made to concentrate on those students still in school who seemed to be in danger of dropping out on the basis of such indicators as, truancy suspensions, tardiness, cutting classes, and high absenteeism. In this manner, the factors that were immediately involved in the intent to leave school could be investigated. Secondly, the effectiveness of the treatment in forestalling dropping out could be tested, and thirdly, potential dropouts were more readily available for the project.

A case study (see appendix C) which illustrates some of the common characteristics of dropouts as revealed by the literature was developed on one of the students selected to participate in the project. The name of the student and his parents have been changed to protect their identities.

An analysis of data collected from school records revealed that three hundred students were identified as potential dropouts. Out of the three hundred identified and interviewed sixty were selected, at random, to participate in the project. Thirty students were assigned to an experimental group, and thirty were assigned to

a control group. The control group did not receive any special treatment, and functioned as part of the traditional vocational program in autobody repair. Each group was composed of twenty-seven males and three females. Ages varied from 16-19 years. Ability levels ranged from low to average.

Workshops

Three, one-day workshops were held for participating instructional personnel to explain the purposes of the project, and the role each individual would assume during its execution. The goal was not to stress the importance of the dropout problem, but to motivate personnel to want to work on solving the problem.

One of the most effective techniques for telling the story was to use dropouts themselves. A panel of four dropouts was formed. They discussed their feelings about school, and were at times bitter, disappointed and shocking, but always candid. They spoke honestly about their experiences. The author acted as the moderator of the panel, and was extremely cautious in an attempt to make the panelists feel at ease.

As a follow-up to the panel discussion, teachers discussed and listed as many factors as possible that cause students to leave school. The intensity of these factors was then measured. Strengths of the factors varied from student to student. A listing of the factors that keep students in school was then assembled.

After all of this information was gathered, a chart that displayed these factors was composed (see appendix D).

The author then provided a brief overview of information revealed during the preliminary investigative phase of the project (see pages 5-6). Workshop participants expressed enthusiasm to the point where they wanted to do something about the problem.

During the remaining workshop sessions activities were planned to assist participants with the development of process and behavioral objectives, and the formation of a delivery system leading to the actualization of terminal objectives. Activities involved the conversion of goal images into an action plan, and an exchange of successful practices where skilled teachers shared with workshop participants techniques of working with students possessing characteristics of a potential dropout.

Teachers projected themselves nine months into the future. They identified positive images such as, effective guidance and counseling services, smaller classes, individualized instruction, increased student involvement in extracurricular activities, community involvement, and positive student-teacher relationships that they thought to be helpful in reducing the dropout rate. From the various images participants identified terminal objectives that they would like to have accomplished by the end of the project (see page 18).

Instructional materials and equipment, consumable supsupplies, consultants and other appropriate resources were identified with the assistance of the instructional personnel involved in the project. A well-equipped laboratory located in the Mack Center Annex was designated as the site to house the experimental group. Funds for the implementation of the project were absorbed through the vocational budget (see appendix F).

Instructional Plan

The experimental group was divided into two sections of fifteen students each. They rotated on a one-half day about basis. Students who were instructed by the related teacher in the morning rotated to the skills laboratory in the afternoon and vice versa. This schedule was reversed every sixty days to offset and make note of any advantages or disadvantages any one session may have had over the other.

The control group was rostered on a week about schedule. All students were grouped together in the laboratory for one week, and rostered into the related class the next week. This is the standard operating procedure used by the school district.

Both the experimental and control groups were pretested and posttested to keep track of differences in the event that they did occur. Other tests were interspersed to the experiment-

al group throughout the project.

The experimental group received intensive instruction in autobody repair and related subject matter in a self-contained laboratory where interpersonal relationships between and among teachers and students were easily precipitated. The control group received no special treatment, and functioned as part of the traditional vocational program.

Self-directed instructional modules and small group instruction constituted the instructional plan. Each module included the following component parts: behavioral objectives, prerequisites, pre-assessment, instructional activities, post-assessment and remediation. Autobody repair instruction was devoted to developing skills in straightening, shrinking, forming, filling, and beautifying damaged automobiles and returning them to their original contour and finish. The use of oxyacetylene gas welding, hand tools and spray equipment were stressed. Instructional areas were supplemented by a media center (references, video- and audio-cassette tapes, films, filmstrips) and simulation games. Students were given the opportunity to retake any post-assessment until a score of 100 percent was attained.

The related subject matter dealt with autobody repair, physics, chemistry, social studies, related mathematics, English, career inventories and job hunting techniques. Each student

prepared a handbook which contained informational and instructional sheets dealing with tools, equipment, safety, industry, and weekly evaluations.

Individualized instruction was performed on an informal basis when students were not engaged in specific skills practice or group instruction. Guest speakers and demonstrators from the local industries such as, Sun Oil Company, Scott Paper Company, British Petroleum Company, Sun Shipbuilding Company, and Baldt and Anchor Company participated twice each week. Informal discussions allowed for more student participation.

CHAPTER VI

INSTRUCTIONAL MODULES

Instructional activities were designed to assist the student in achieving instructional (behavioral) objectives. These activities described as modules provided for individualized instruction and remediation for students when needed.

Students acquired certain competencies, skills, and knowledge which included the identification of basic tools, identification of autobody parts, estimation of physical damage, special autobody hand tools, repair and replacement procedures, cost estimates, oxyacetylene welding, techniques for shaping metal, refinishing procedures, and reading.

Individualized instruction focused the emphasis of the instructional process on each individual student taking into account his abilities, interests, motivation, goals, rate of participation, strengths, weaknesses and prognosis for moving ahead in various projects. The teacher assumed the role of learning facilitator and prescriber of learning resources, activities and evaluation procedures. The format used in module development was adapted from the model developed in a research project conducted by the College of Education at the University of Houston in 1971. Each of these modules are dealt with in detail on the following pages.

W. R. Houston, Developing Instructional Modules, (Texas: College of Education, University of Houston, 1971.

Module 1 - Identification of Basic Tools

Students were given a set of twenty-five basic tools used in autobody repair work. The objective was to identify the basic tools, orally, and place them in their proper silhouetted position within the laboratory with 100 percent accuracy. There were no prerequisites to this module.

The student met with the instructor in a closed, individual session during pre-assessment. As the instructor pointed to a varied selection of tools, the student named the tool, and placed it in its proper position. The instructor judged the adequacy of the student's performance, and recorded the results.

During instructional activities, students read Chapter 1 in Principles of Autobody Repairing and Repainting which described the tools, processes and procedures used in autobody work. Demonstrations were given using various tools and techniques in classroom sessions.

Post-assessment competencies were ascertained upon the student's ability to identify, orally, by name, twenty-five basic tools used in autobody work, and place them in their proper silhouetted position within the laboratory with 100 percent accuracy. Where necessary, the instructor made the determination whether the student had to repeat an instructional activity until the objective was achieved. A comparison of student responses to module 1 is shown in Table 1.

TABLE 1

IDENTIFICATION OF BASIC TOOLS

(Comparison of Student Responses)

Number of Student Responses	Pre-assessment	Post-assessment
	Percent of Correct Responses	Percent of Correct Responses
30	0	100

Module 2 - Identification of Autobody Parts

Students were given a three-dimensional model of an automobile. Their objective was to assemble the model, and identify each part, orally, as they were placed in position with 100 percent accuracy. There were no prerequisites to this module.

During pre-assessment, the student met with the instructor in a closed, individual session. The instructor observed the adequacy of the student's performance, and recorded the results.

All students were involved in instructional activities. Films that described automobile body parts and their relationship to each other were viewed. During class sessions, discussions centered around the automobile's impact on our society.

Competencies were ascertained by the student's ability to assemble the model, identify each part, and place them in their

correct position with 100 percent accuracy. Where necessary, the instructor determined whether the student repeated an instructional activity until the objective was achieved. A comparison of student responses to module 2 is shown below in Table 2.

TABLE 2

IDENTIFICATION OF AUTOBODY PARTS

(Comparison of Student Responses)

	Pre-assessment	Post-assessment
Number of Student Responses	Percent of Correct Responses	Percent of Correct Responses
30	20	100

Module 3 - Estimation of Physical Damage

Students observed a damaged automobile, Given an estimate sheet, students identified the damaged sections, and prepared a detailed estimate sheet of the damage with 100 percent accuracy after the training period. Successful completion of module 2 was a prerequisite to module 3.

During the pre-assessment period, students in groups of ten inspected a damaged automobile, and prepared a written estimate of the physical damages. An evaluation of the estimate sheets was made by the instructor, and the results recorded.

Instructional activities included class sessions on estimation of damages and use of parts manuals. Competencies were ascertained upon the student's ability to identify damaged sections of the automobile, and prepare a detailed estimate of the damage with 100 percent accuracy. A comparison of student responses to module 3 is shown in Table 3.

TABLE 3

ESTIMATION OF PHYSICAL DAMAGE

(Comparison of Student Responses)

	Pre-assessment	Post-assessment
Number of Student Responses	Percent of Correct Responses	Percent of Correct Responses
30	10	100

Module 4 - Special Autobody Hand Tools

Given a complete laboratory, students identified different types of special autobody hand tools, and placed them in their proper position within the laboratory with 100 percent accuracy after being instructed. Successful completion of module 1 was a prerequisite to module 4.

During pre-assessment students met with the instructor in a closed session. The instructor displayed a varied selection of

tools as the student named them, and placed them in their proper position. The instructor judged the adequacy of the student's performance, and recorded the results.

Instructional activities involved class sessions during which the following special tools were displayed, and their use and purpose described:

a. Dolly-blocks (heel, all-purpose, wedge)
b. Spoons (short elbow, curved, long, flat top)
c. Hammers (bumping, dinging, pick, trimmers, cross pein, shrinking, rubber)
d. Vixen file (file, half-round)
e. Panel cutter
f. Pick tools
g. Solder paddle
h. Plastic cutting file (file, half-round)
i. Slapping file (coarse, smooth, half-round, flat)
j. Pull hooks
k. Impact knocker

Special emphasis was placed on instructing students as to which tool should be used for a specific job. Competencies were ascertained upon the student's ability to identify different types of special autobody hand tools, and place them in their proper position within the laboratory with 100 percent accuracy after being instructed. A comparison of student responses to module 4 is shown in Table 4 on the following page.

TABLE 4

SPECIAL AUTOBODY REPAIR TOOLS

(Comparison of Student Responses)

	Pre-assessment	Post-assessment
Number of Student Responses	Percent of Correct Responses	Percent of Correct Responses
30	40	100

Module 5 - Repair and Replacement Procedures

A determination of the correct damage estimate was made. Students listed the procedures for replacing and repairing the damage as well as the correct tool used in the operation with 100 percent accuracy. Successful completion of modules 1, 2, 3, and 4 was a prerequisite to module 5.

During a pre-assessment period students listed replacement and repair procedures. The instructor evaluated the adequacy of the student's performance, and recorded the results.

Instructional activities involved class sessions on replacement and repair procedures, and the proper tools to be utilized for different types of jobs. Mini-sessions were held to review modules 1, 2, 3, and 4. Competencies were ascertained upon the student's ability to list the procedure for replacing and repairing damages as

well as identifying the correct tools to be used in the operation with 100 percent accuracy. A comparison of student responses to module 5 is shown in Table 5.

TABLE 5

REPAIR AND REPLACEMENT PROCEDURES

(Comparison of Student Responses)

	Pre-assessment	Post-assessment
Number of Student Responses	Percent of Correct Responses	Percent of Correct Responses
30	50	100

Module 6 - Cost Estimates

Students were given an appropriate parts manual. The objective was to locate needed materials for the job, and prepare a written cost estimate with 100 percent accuracy. Successful completion of module 5 was a prerequisite to module 6.

Instructional activities involved class sessions during which the parts of the manual were explained. Students practiced locating various parts of the manual. Instructions were given in typical labor costs, and estimated time of completion for repair and replacement work. Competencies were ascertained by the student's ability to locate the needed materials for the job, and prepare a

written cost estimate with 100 percent accuracy. A comparison of student responses to module 6 is shown in Table 6.

TABLE 6

COST ESTIMATES

(Comparison of Student Responses)

	Pre-assessment	Post-assessment
Number of Student Responses	Percent of Correct Responses	Percent of Correct Responses
30	60	100

Module 7 - Oxyacetylene Welding for Autobody Repair

Oxyacetylene welding equipment was demonstrated to the students as they actively participated. The objective was to identify oxyacetylene welding equipment and demonstrate safety precautions while completing assignments as determined by the instructor with 100 percent accuracy. Successful completion of module 6 was a prerequisite for module 7.

Instructional activities required students to attend class sessions to observe displays, and demonstrations as they related to oxyacetylene welding equipment and demonstrate safety precautions while completing assignments as determined by the instructor with 100

percent accuracy. When necessary, the instructor made the determination as to whether the student had to repeat an instructional activity until the objective was achieved. A comparison of student responses to module 7 is shown in Table 7.

TABLE 7

OXYACETYLENE WELDING FOR AUTOBODY REPAIR

(Comparison of Student Responses)

	Pre-assessment	Post-assessment
Number of Student Responses	Percent of Correct Responses	Percent of Correct Responses
30	10	100

Module 8 - Techniques of Shaping Metal

All students were given a section of damaged sheet metal. The objective was to have the student restore the damaged sheet metal to a usable condition with 100 percent accuracy. Successful completion of modules 6 and 7 were a prerequisite for involvement in module 8.

During a pre-assessment period, students attempted to restore sections of damaged sheet metal to a usable condition as de-

termined by the instructor. The instructor judged the adequacy of the student's performance and recorded the results. Instructional activities included lectures, demonstrations and visitations to local industries.

Post-assessment competencies were ascertained upon the student's ability to restore a section of damaged sheet metal to a usable condition as determined by the instructor with 100 percent accuracy. When necessary, the instructor made the determination as to whether a student had to repeat an instructional activity until the objective was achieved. A comparison of student responses to module 8 is shown in Table 8.

TABLE 8

TECHNIQUES OF SHAPING METAL

(Comparison of Student Responses)

	Pre-assessment	Post-assessment
Number of Student Responses	Percent of Correct Responses	Percent of Correct Responses
30	40	100

Module 9 - Refinishing Procedures

An automobile that had been restored to its original contour was made available to the students for this module. The objective was to determine the condition of the surface, and perform the necessary refinishing procedures with 100 percent accuracy. Successful completion of module 8 was a prerequisite to module 9.

During pre-assessment, students attempted to determine the condition of the surface, and performed the necessary refinishing procedures with 100 percent accuracy. The instructor judged the adequacy of the student's performance and recorded the results.

Instructional activities involved shaping, filling, sanding, sealing and masking procedures. Frequent visitations were made to local industries. Post-assessment competencies were ascertained by the student's ability to determine the condition of the restored automobile surface, and perform the necessary refinishing procedures with 100 percent accuracy. A comparison of student responses to module 9 is shown in Table 9.

TABLE 9

REFINISHING PROCEDURES

(Comparison of Student Responses)

	Pre-assessment	Post-assessment
Number of Student Responses	Percent of Correct Responses	Percent of Correct Responses
30	100	100

Module 10 - Reading

Students were given instructions over a nine-month period based on individualized needs. The objective was for the student to achieve two or more grade levels in reading using the standardized Nelson Reading Test. There were no prerequisites to this module.

During pre-assessment the students were given form A of the standardized Nelson Reading Test. The guidance counselor and the instructor recorded the results. Instructional activities involved students in small group reading seminars three times a week, and tutoring sessions with the district's reading specialist.

During post-assessment the students were given form B of the standardized Nelson Reading Test. The guidance counselor and the instructor recorded the results. Competencies were ascertained upon the student's ability to achieve two or more grade levels in

reading. When necessary, the instructor and the guidance counselor made the determination as to whether the student had to repeat the instructional activities until the objective was achieved. A comparison of student responses to module 10 is shown in Table 10.

TABLE 10

READING

(Comparison of Student Responses)

	Pre-assessment	Post-assessment
Number of Student Responses	Percent of Correct Responses	Percent of Correct Responses
30	80	100

CHAPTER VII

EVALUATION

Evaluation of the project was accomplished internally and externally. An internal evaluation was performed by participating instructional personnel and students. An external evaluation was performed by the advisory committee and the supervisory team.

The evaluation procedure centered around teaching effectiveness, student achievement, curriculum, facilities, supportive services, and the achievement of the project's objectives in reducing tardiness, suspensions, cutting classes, absenteeism, dropout rate, and increasing participation in school activities.

Instructional personnel evaluated the project in terms of its major strengths and weaknesses, student achievement in terms of student performance objectives, skills development, and provided suggestions for improvement. Student response scales (see appendices F and G) were developed and administered to evaluate instructional personnel and the pilot project. At the conclusion of the project, students assessed the humanistic characteristics of instructional personnel by responding to the identical criteria (see pages 24-25) that was used by the supervisory team and the advisory committee during the selection process. A comparison of responses is shown in Table 13.

The advisory committee assisted with evaluating facilities (see appendix H), project needs, trends in employment, and trends in training.

Formative and summative evaluations were performed throughout to assess strengths and weaknesses, and to make the necessary adjustments to insure quality. Instructional personnel and students conducted formative evaluations through student-teacher interaction, quizzes, check sheets, and demonstrations performed by both students and teachers. Summative evaluations were conducted by the supervisory team, advisory committee, instructional personnel, and students through the use of narrative reports.

Findings

As shown in Table 11, pre- and post- competency tests in the subject matter areas of oxy-acetylene welding, autobody repair, the world of work, related vocabulary, and related mathematics were administered to both the experimental and control groups. Ten points were assigned to each area. There were 50 possible raw score points in the five subject matter areas. A comparison of pre- and and post-test mean scores showed that all students improved significantly from the beginning to the end of the project. The experimental group's post-test mean scores increased 35.0 points when compared to pre-test mean scores while the control group's post-test mean scores increased 21.6 points when compared to pre-test mean scores.

Participation in the project was effective in increasing student self-concept, and reducing factors contributing to students dropping out of school. A comparison of attendance for both groups in Table 12 showed a reduction in absenteeism, suspensions, tardiness, cutting of classes, and the dropout rate among students in the experimental group.

Significant results indicated that humanizing the educational process and changing the delivery system of a vocational program was effective in helping the potential dropout to remain in school. Students responded to the humane characteristics possessed by instructal personnel as identified by the supervisory team and advisory com-

mittee. The results as indicated in Table 13 showed that their was a direct relationship between how the students viewed instructional personnel and the criteria used in the selection process (see page 55).

Feelings and attitudes toward the method of instruction were analyzed through oral and written evaluations. A favorable attitude toward the competency-based education approach existed among both the students and the instructional personnel.

A high level of staff participation, with direct responsibility for sharing in program development, implementation and evaluation, was recognized as being of utmost importance toward the achievement of project outcomes.

TABLE 11

COMPETENCY TEST

Subject	Possible Raw Scores	Achieved Scores (Mean)			
		Control Group		Experimental Group	
		Pre-test	Post-test	Pre-test	Post-test
Oxyacetylene Welding	10	3	6	2	8
Autobody Repair	10	3	7	3	9
World of Work	10	2	6	2	9
Related Vocabulary	10	2	5	2	8
Related Mathematics	10	2	4	0	7
	Total...50	12	28	9	41

TABLE 12

ATTENDANCE COMPARISONS BETWEEN GROUPS
1975-76 CALENDAR YEAR

	Control Group			Experimental Group		
	Autobody Repair	Related	Total	Autobody Repair	Related	Total
Students Enrolled	30*	30*	30	15**	15**	30**
Average Daily Attendance	20	16	18	14	14	28
Percent of Daily Absenteeism	33 1/3	53.3	43.3	6.6	6.6	6.6
Average Weekly Suspensions	1	3	2	0	0	0
Average Daily Tardiness	5	5	5	2	2	2
Average Daily Cutting of Classes	2	2	2	0	0	0
Confirmed Dropouts	9		9	0		0
Percent of Dropouts	30		30	0		0

* Week-about Schedule (see page 32)

** Half-day about Schedule (see page 32)

TABLE 13

HUMANISTIC CHARACTERISTICS OF SELECTED INSTRUCTIONAL PERSONNEL

(Comparison of Responses Between Selection Committee and Experimental Group)

Characteristic	Selection Committee (13 members)		Experimental Group (30 Students)	
	Yes	No	Yes	No
Observed and listened to students with care and concern	13	0	30	0
Achieved openness in student-teacher relationships and permitted responses and interaction	13	0	30	0
Achieved free and constructive communication with students	12	1	30	0
Was accepting of different opinions	11	2	30	0
Displayed concern for persons as individuals	13	0	30	0
Permitted the student to discover and excercise their own resources	12	1	30	0
Recognized and accepted different ways of responding to students' individualized needs	13	0	30	0
Made the development of the learner the chief goal in teaching subject matter	13	0	30	0
Responded in ways that lead students to assume responsibility	12	1	30	0
Accepted himself/herself as is, and was able to accept others as they were	13	0	30	0
Exhibited behavior that was predictable and consistent	13	0	30	0
Was hospitable and friendly	13	0	30	0
Was willing to perform various school tasks that were above and beyond stated duties	13	0	30	0
Actively participated in school functions, and committees	13	0	30	0
Derived satisfaction from being a member of the school system and teaching profession	13	0	30	0

CHAPTER VIII

CONCLUSIONS AND RECOMMENDATIONS

This practicum report described the development, implementation and evaluation of a pilot project aimed at reducing truancy, suspensions, tardiness, class cutting and high absenteeism that contributed to the high dropout rate among students enrolled in vocational education programs in the Chester Upland School District. A conceptualized solution to the identified problem was to humanize the educational process for a group of potential dropouts, and to change the delivery system within a single course of a vocational training program by making a more careful selection and preparation of teacher personnel, conducting a more effective guidance and counseling program, providing for individualized instruction, increasing student involvement in extracurricular activities, soliciting community involvement, maintaining a closer liaison between the school, the community and industry, and by continuously monitoring and evaluating student performance.

Based upon demonstrated success of the pilot phase, the expansion and refinement of the program into other vocational courses in the high school and finally into all industrial arts programs in each of the four middle schools throughout the school district will constitute the second phase of the project, and is the subject of the

author's Group-Individual Practicum covered in a separate report. The expanded programs will utilize techniques that have been demonstrated to be effective during the pilot effort with modifications to suit the wider range of needs encountered throughout the district.

The following recommendations were made to the Chester upland School District's Board of Education for approval to have implemented in phase two of the project:

1. That the program become a permanent part of the school district's curriculum.
2. That the program be expanded to include other skill areas in the high school and industrial arts programs in each of the district's four middle schools.
3. That a certified vocational guidance counselor be employed to work solely with vocational students.
4. That in-service workshops be conducted at regular intervals to address the problem of students dropping out of school.
5. That the program be evaluated on an annual basis for the purpose of improving its effectiveness.
6. That a resource center be created for the vocational department.
7. That all advisory committees be activated in each vocational program area.
8. That the use of paraprofessionals in vocational education be explored to reduce instructional costs.
9. That a follow-up study be conducted on students who participated in the project at two-year intervals.
10. That an attendance director be employed to maintain, coordinate, and compile attendance records for the entire district.

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APPENDIX A

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Employment: Count's Hickory House, Proprietor
Chester, Pennsylvania

Mr. Keister Newman
2720 W. Sixth Street
Chester, Pennsylvania 19013
Employment: Sun Oil Company
Chester, Pennsylvania

Mrs. Caroline Jones
425 Highland Avenue
Chester, Pennsylvania 19013
Employment: Housewife

Mr. Timothy Middleton
Chester High School
Chester, Pennsylvania 19013
Employment: Student

Mr. John Spence
817 Pusey Street
Chester, Pennsylvania 19013
Employment: Self-employed in autobody repair and
former student

APPENDIX B

INTERVIEW CHECK SHEET

Name of Individual Interviewed _____

Date of Interview _____

	Rating*			
	E	G	F	P
The individual demonstrated that he/she				
observes and listens to students with care and concern	___	___	___	___
achieves openness in student-teacher relationships to permit response and interaction	___	___	___	___
achieves free and constructive communication with students	___	___	___	___
is accepting of different opinions	___	___	___	___
displays concern for persons as individuals	___	___	___	___
lets the student discover and excercise his own resources	___	___	___	___
recognizes and accepts different ways of responding according to student's individualized needs	___	___	___	___
makes the development of the learner the chief goal in teaching subject matter	___	___	___	___
responds in ways that lead students to assume responsibility	___	___	___	___
accepts himself as is, and is able to accept others as they are	___	___	___	___
exhibits behavior that is predictable and consistent	___	___	___	___
is hospitable and friendly	___	___	___	___
is willing to perform various school tasks that are above and beyond stated duties	___	___	___	___

actively participates in school functions, committees and organizations ____ ____ ____ ____

derives satisfaction from being a member of the school system and teaching profession ____ ____ ____ ____

* Excellent = 4
  Good = 3
  Fair = 2
  Poor = 1

_____

Interviewer's Signature

_____

Date

APPENDIX C

CASE STUDY - FRANK THOMAS LEWIS

Referral

Frank was referred by the Principal of the Chester High School as a behavior problem. The Principal stated that Frank was constantly disrupting classes and appeared to need attention. Frank is sixteen years old, and was repeating the ninth grade.

His teachers stated that Frank was constantly seeking attention by way of "acting out" in class. He was constantly talking and acting as class comedian at every opportunity. He seemed restless, and unable to sit still. His homework was never done, and he often came to class without his books and said that he had forgotten them. He was often asked to leave the classroom because his actions made it impossible for the teacher to teach. He disrupted other classes when on the way to the Principal's office where he was frequently sent for disciplining.

Personal Information

Frank Thomas Lewis
725 West 17th Street
Chester, Pennsylvania
Birthdate: April 14, 1960

Parents: Mr. and Mrs. Ronald Smith
Siblings: 2 brothers and 3 sisters

Frank lives with his mother and step-father in a modest, well-kept home which they are buying. His peer relationships were poor, and he was constantly fighting with his younger brothers and sisters.

Physical and Health Factors.

Frank's general health record was recorded as normal. He had had all of the usual childhood diseases with no problems reported. Mrs. Smith remembered nothing unusual about his health history. The school nurse indicated that he was presently in excellent health with a minimum number of complaints from him during the school year.

Cumulative Record Information.

Frank came to Chester High School in the ninth grade. He was a repeater this year. He also presented a behavior problem in the middle school from which he came, and had been referred to the Child Guidance Clinic of Family Services in Delaware County.

At Chester High School, he did not show any improvement. His teachers' comments from grades four through nine have been as follows:

Grade Four: "Frank is quite a problem. He is very disruptive. Constantly fighting. Exposed himself to classmates in the teacher's absence. Needs constant supervision."

Grade Five: "Poor peer relationships. No self-control. Involved in one conflict after another. Cannot cope with regular classroom routine."

Grade Six: "Very readily becomes involved as a problem. Has bitten children. Resents correction."

Grade Seven: "This young man is a constant nuisance. He is talkative and disruptive in the classroom. The 'acting out' of this boy is unbearable. He has been suspended."

Grade Eight: "Has very serious emotional problems. Late and absent constantly. Threatens violence against teacher; uncooperative. Does not belong in regular classroom."

Grade Nine: "Chronic truant - cutting classes - delinquent-emotionally-disturbed - need help."

Test Data:

Mental Ability-Wechsler Intelligence Scale - March 12, 1973.

Verbal Ability Quotient	82 Low Average
Performance Ability	89 Low Average
Full Scale Intelligence	84 Low Average

Frank's effective level of mental functioning is low average. He scored highest in arithmetic, attention span, pictorial analysis and art. He scored lowest in vocabulary, information, verbal reasoning, comprehension, and manual dexterity.

School Achievement - Wide Range Achievement Test - 1971

Reading	Grade 2.8	Quotient 92 Low Average
Spelling	Grade 3.8	Quotient 99 Average
Arithmetic	Grade 3.9	Quotient 100 Average

By comparison with his mental ability ratings, Frank did rather well with his general mental functioning. The scores above had been recorded from fourth grade tests.

Metropolitan Achievement Test - Grade 5 - I. Q.: 96
Otis Quick-Scoring Mental Ability Test - Grade 9 - I. Q.: 91.
Psychological Test - February, 1970 - Grade 5

At that time, both Frank and his mother were interviewed by the school counselor. It was reported that Mrs. Smith stated his problem as such, "Frank cuts up a great deal, cannot sit still, and will not listen." He varied a great deal in his attitude toward school and responsibilities.

Background Information.

Frank's birth and early development were normal. His training habits were satisfactory. He seemed to have some artistic ability and liked to put things together with his hands; however, he tended to be destructive and tore things apart without being able to mend them.

Socially, he was a "big agitator." He was afraid of the older boys whom he teased and threatened to beat up. He had a good sense of humor and performed as the class clown at school. At home, he was always fighting with his brothers and sisters.

He was very critical of them, teased them constantly and stirred them up. He was a poor loser in sports. Sometimes, he took shortcuts to win a game or to control the situation. Mrs. Smith felt quite sorry for Frank. She would not allow him to ride a bicycle or to go to the store because she was afraid that he might be harmed. She admitted that Frank had no respect for her because of her inconsistentencies and emotional variability. She was aware of the fact that she worried him too much and that she tried to control him emotionally.

Personality Features as Described by the Psychologist.

As reported by the psychologist, Frank's main problem was one of physical tension. He has always been a highly active and busy child who was unable to relax and to pay attention to regular quiet work.

Despite his liking for people, he got himself into trouble because of his feelings that they would not accept him or think that he was a failure. He tended to hurry without checking his work or without being able to evaluate what he did. Since he had limited insight, he improved only with difficulty in his work.

Psychologist's Recommendations.

1. A program for slowing Frank down at home was recommended to the mother. He should have daily, systematic training in doing some solitary work without emotional upset.

2. The mother was advised to get together with the father and agree on discipline and moderation in

the use of punishment and rewards.

3. The boy is extremely dependent on his mother, and can't seem to make his own decisions. It is important that she "wean" herself from his emotionally, and at the same time gain his respect by being consistent, and by avoiding emotional outbursts and unnecessary talk. She must also support the words with appropriate action.

4. The parents are to be talked to, and Frank's problems will be explained to them again. They will be counseled on how to deal with his problem.

5. Therapy for the boy was strongly urged.

Summary of Investigator's Conferences with Frank

Frank is sixteen years old, and was repeating the ninth grade. He was small for his age, and could easily be mistaken for thirteen or fourteen years of age. He is Black, has dark hair and dark eyes. When he came to the investigator's office, he had a smile on his face, and seemed happy to be there. This showed throughout the conferences held. He always asked before he left when he could come again, and if he knew that there would be a holiday coming that might interfere with his conference time, he would ask if he could come on another day.

During the first meeting, the investigator explained to him that he was referred to participate in the project because the school felt that he needed help. He said that he did. The conversation centered around school as being a place to learn, and when something interferes with that learning there is a problem. He referred to himself as being "bad" and blamed himself for

causing fights between his parents. He stated that his father told him, "you are driving your mother and me apart because of the way you are acting in school." When he spoke of his feelings toward this, he stated that he would like to try to do better.

Frank agreed that he could do better if he wanted to, and went on to talk about his ten year old brother. He indicated definite jealousy by stating that his father liked his brother better because his brother did well in school, and did what he was supposed to do at home. Frank indicated that this did not upset him since he got along well with his mother. Frank seemed to defend his failures by calling his brother's accomplishments "acts of bribery." He also indicated that his brother was spoiled.

When he was asked what he would like to become as an adult, he responded by stating that he wanted to become an artist. It was agreed that he had to work hard to become an artist. When it was suggested that he bring in some of his drawings, this seemed to make him happy.

Summary of Conferences with Parents.

Both parents were employed. Mrs. Smith worked in a bakery during the day, and Mr. Smith worked the night shift at the Sun Oil Company. Mr. and Mrs. Smith were very cooperative, but indicated helplessness. It appeared that Frank behaved in the same manner at home that he did at school.

Mrs. Smith blamed herself for Frank's difficulties, and added that maybe she was weak. She also indicated marital problems between her and her husband, but she did not admit that Frank was the cause of their difficulties.

When the subject concerning the follow-up of the psychologist's recommendations was approached, both parents stated that they had not followed through because, at that time, Mr. Smith did not feel the necessity, and decided that they would handle the situation themselves.

Both parents seemed responsive to suggestions for effecting change if Frank's behavior at school. The importance of joint agreement between both parents toward working together to help their son resolve his problems was stressed. Mr. Smith expressed a sincere interest in working with his wife in trying to seek solutions to Frank's problems.

Conference with Psychiatrist and Therapist

At the time that the investigator spoke with the psychiatrist, the family had been interviewed once. The psychiatrist indicated that there seemed to be a conflict in the home. Frank was in need of help because he showed delinquent tendencies. He felt that the mother's feelings of rejection by the husband made her feel rejected and helpless, and this, in turn, reflected in the manner in which she accepted her children.

At present, Frank is being seen by a therapist who stated that the pschological report indicated that the mother is over-protective, and the child exhibited an aggressive attitude. Psychological tests indicated an I. Q. of 84, a dependence on the mother, and an affectional need for her causing sexual frustration.

Evaluative Summary

Frank was referred to the investigator because he was not achieving academically, and because of his disruptive behavior. His test results were indicative of an insecure and rebellious child who was functioning below his potential in both academic and intellectual areas. His present behavior impeded his learning process.

Both parents seemed to need further assistance in solving their problems, and had been referred to the Child Guidance Clinic of Family Services in Delaware County. The family is being served, at the present time, by Family Services.

Recommendation

It was recommended that Mr. and Mrs. Smith be encouraged to enroll Frank in the school district's pilot program which was designed to reduce factors contributing to students dropping out of school so that Frank might enter the tenth grade next September with a firmer foundation.

APPENDIX D

SOME FACTORS WHICH CAUSE STUDENTS

TO LEAVE OR REMAIN IN SCHOOL

Repels

Few friends in school _____

Failing _____

No family support _____

Does not "belong" _____

Poor reader _____

Overage _____

Teachers unfair _____

Lazy _____

Attracts

Teach encouragement _____

School is worthwhile _____

Helpful counselor _____

Can't get a job _____

Parents insist on attendance ____

Teacher promotes interest _____

Diploma needed for future work __

Wants to play football _____

APPENDIX E

BUDGETARY PROVISIONS

Expenditures:

Instructional Salaries.....	$33,700.00
Instructional Supplies.....	4,000.00
Equipment.....	10, 500.00
Total.....	$48,200.00

APPENDIX F

STUDENT RESPONSE SCALE
(Instructor Evaluation)

This questionnaire is being administered to help us determine your attitudes, interests, and opinions related to this course and the way the course material is presented. It is hoped that through procedures such as these, improvements in instruction, course material, and methods of teaching may occur. It is essential, therefore, that you respond to each questionnaire item carefully but frankly.

PLEASE CHECK ONE IN EACH CATEGORY. DO NOT SIGN YOUR NAME.

SUBJECT_____ INSTRUCTOR _____ DATE _____

I BELIEVE MY INSTRUCTOR:

A. _____ seems prepared
_____ seems unprepared
B. _____ seems organized
_____ seems unorganized
C. _____ seems interested in class
_____ seems uninterested in class
D. _____ seems interested in students
_____ seems uninterested in students
E. _____ presents material very well
_____ is about average in the presentation of materials
_____ presents material poorly

THE LEARNING PROCESS:

A. STIMULUS TO THINKING

_____ I was frequently stimulated to THINK
_____ I was occasionally stimulated to THINK
_____ Little or no thought was required of me

B. RESPECT FOR STUDENT THINKING

_____ Ideas of students not welcomed
_____ Ideas of students accepted, but not encouraged
_____ Free expression of ideas encouraged

C. INSTRUCTOR'S PERSONAL CHARACTERISTICS (voice, dress, mannerisms, etc.)

_____ Highly conducive to learning
_____ Somewhat distracting
_____ Highly distracting

D. EVALUATION (tests, quizzes, exams)

_____ excellent
_____ satisfactory
_____ unsatisfactory

E. GRADING SYSTEM

_____ excellent
_____ satisfactory
_____ unsatisfactory

F. ORGANIZATION (materials and activities)

_____ excellent
_____ satisfactory
_____ unsatisfactory

G. INSTRUCTOR'S COMMAND OF SUBJECT MATTER

_____ thorough acquaintance
_____ fair acquaintance
_____ inadequate acquaintance

H. HOW OFTEN WERE OPPORTUNITIES PROVIDED TO WORK WITH FELLOW STUDENTS IN THE COURSE?

_____ frequently
_____ occasionally
_____ very rarely

CLASS MANAGEMENT:

A. IS THE INSTRUCTOR APPROACHABLE?

_____ usually
_____ occasionally
_____ seldom

B. HAVE YOU BEEN ABLE TO SECURE ASSISTANCE WITH YOUR PROBLEMS IF YOU NEEDED HELP?

_____ yes
_____ no

C. STUDENT-TEACHER RELATIONSHIP

_____ strong feeling of good will
_____ reasonably friendly atmosphere
_____ feeling of hostility

D. HOW DOES THIS INSTRUCTOR COMPARE WITH YOUR OTHER INSTRUCTORS?

_____ above average
_____ average
_____ below average

OTHER COMMENTS:

Please comment on any aspects of the teaching process that you have found to be most helpful in this course.

APPENDIX G

STUDENT RESPONSE SCALE
(Instructor and Program Evaluation)

Directions: Your help is requested in evaluating the pilot program at the Mack Center. Please respond to each statement as accurately as possible. If you do not understand a statement, do not answer it. Please do not sign your name to this questionnaire. Comments may be made at the end of the questionnaire. Please check only one alternative.

Personal Data: Sex: Male ___ Female ____

CHARACTERISTICS OF THE TEACHER
AND TEACHING

Please check the one best alternative for each statement listed.

1. The instructor presents the subject matter clearly.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

2. The instructor stresses learning rather than grades.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

3. The instructor stimulates students to think independently.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

4. The instructor adjusts teaching to the students' level.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

5. The instructor seems to be interested in teaching courses effectively.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

6. The instructor attempts to motivate all students to learn.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

7. The instructor appears to have a thorough knowledge of the subjects taught.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

8. The instructor is willing to give time and efforts in individual help when students need it.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

9. The instructor uses various teaching methods such as, lectures, class discussion, audio-visual presentations and group work.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

10. The instructor is sensitive to students' feelings and problems.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

11. The instructor makes students feel free to ask questions, disagree or express their ideas.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

12. The instructor is fair and impartial in dealing with students.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

13. The instructor deals with relevant materials in his class.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

14. The instructor asks students to evaluate his teaching and courses at the end of the semester.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

15. The instructor sho[illegible] he is interested in students and student lear[illegible]ll as subject matter.

_____ [illegible]n
_____ [illegible]etimes
_____ [illegible]arely

16. Course objectives are clearly stated.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

17. Reading assignments are not too difficult.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

18. Course tests are usually fair and based on the objectives of the course.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

19. Course grades are fairly assigned.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

20. The course is relevant to the needs of students.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

21. Your responsibilities in the courses are clearly defined.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

22. Class time is well spent.

_____ a. Often
_____ b. Sometimes
_____ c. Rarely

APPENDIX H

FACILITIES EVALUATION

Date of Evaluation _____ Program Area _____

General Purpose _____

Name of Laboratory or Name of Instructional Space _____

Name (s) of Evaluator (s)	Title
_____	_____
_____	_____
_____	_____
_____	_____

Directions: Read each statement, and then judge the degree to which the statement is true or is accomplished by the program or department. Use the following scale:

0 - If not applicable
1 - If well below average
2 - If slightly below average
3 - If slightly above average
4 - If well above average

1. Facilities are large enough in size to accomodate the student load. _____
2. The teacher has a private office for student counseling. _____
3. The department is located conveniently in the school. _____
4. Facilities are shaped and designed suitably for learning. _____
5. The department facilities provide a separate classroom. _____
6. The department facilities have suitable floor conditions. _____
7. Ceiling height is adequate. _____
8. The department heating is adequate. _____
9. The department lighting is adequate. _____
10. The department ventilating and cooling is adequate. _____
11. The department facilities have good noise reduction condition. _____
12. Toilet facilities are available near the department. _____
13. Department facilities have appropriate kinds of fire extinguishers available. _____

14. The department equipment has electrical voltage marked. _____
15. Facilities have suitable outside doors for material and project loading. _____
16. There are enough storage areas for learning materials. _____
17. Enough storage space is provided for student projects. _____
18. The department facilities have storage areas which are adequate in size. _____
19. The department facilities have conveniently located storage areas. _____
20. A motion picture projector is utilized in instruction. _____
21. A slide filmstrip projector is utilized in instruction. _____
22. An overhead transparency projector is utilized in instruction. _____
23. An audio cassette recorder is utilized in instruction. _____
24. A video camera and recorder is utilized in instruction. _____
25. There is a departmental library. _____
26. There is an adequate chalkboard utilized. _____
27. There is a bulletin board utilized. _____
28. All shop and laboratory equipment is equipped with safety features. _____
29. The department equipment is arranged to facilitate learning activities. _____
30. There are sufficient work stations for the students. _____
31. The department facilities have up-to-date equipment. _____
32. Quantities of instruments and tools to develop students' occupational skills are sufficient. _____
33. Occupational instruments and tools are well maintained. _____
34. Occupational instruments and tools are accessible to students. _____
35. There are enough work tables (desks). _____
36. Work tables (desks) are the proper size for the program. _____